

CONSENT ITEMS

Agenda Item 12.

February 27, 2003

Project Synopsis m.

MATILIJA DAM STUDIES

Exhibit 3

COASTAL CONSERVANCY

Project Synopsis m.
February 27, 2003

MATILIJIA DAM STUDIES

File No. 00-107
Project Manager: Neal Fishman

RECOMMENDED ACTION: Amend the Conservancy's October 26, 2000, Matilija Dam Studies authorization to grant \$311,000 to the Ventura County Watershed Management District to undertake the Matilija Dam removal feasibility study.

LOCATION: Ventura County, on the Ventura River, 16 miles from the river mouth

PROGRAM CATEGORY: Resource Enhancement

ESTIMATED COST: Coastal Conservancy:
Current proposed authorization: -0-
Previous authorization: \$1,750,000

Since the original authorization, the County of Ventura has committed \$500,000 to the project that had not been anticipated. The United States Department of Justice has also made available \$500,000 of additional funds.

PROJECT SUMMARY: On October 26, 2000, the Conservancy approved the expenditure of \$1,750,000 to complete studies for the removal of the Matilija Dam on the Ventura River (Exhibit 1). The authorization included \$125,000 as a grant to the Institute for Fisheries Resources, a nonprofit group, and up to \$1,625,000 for consultant services. Staff is recommending that \$311,000 of the amount authorized for consultant services be granted to the Ventura County Watershed Protection District, to participate with the Army Corps of Engineers in the completion of the studies.

Since the Conservancy first authorized this project in October of 2000, the County of Ventura became the local sponsor for the Corps of Engineers to complete the feasibility study. They have made \$500,000 of county funds available to help com-

plete the study. The Conservancy has spent approximately \$1,300,000 to date through a contract with the United States Bureau of Reclamation for a number of technical studies. Since state funds were used for these studies, even though a federal agency carried them out, the work completed can be used as part of the County's local sponsor share for the Corps feasibility study. The proposed grant would also be used by the County as part of the local sponsor share of the study. It would pay to refine studies done by the Bureau and to complete environmental and other necessary project analysis. Some of these funds may be paid directly to the Corps as part of the local sponsor share.

Project Description,
Site Description,
Project History,
PROJECT SUPPORT,
CONSISTENCY WITH
CONSERVANCY'S
ENABLING LEGISLATION,
COASTAL ACT, LCP,
& PROJECT SELECTION
CRITERIA & GUIDELINES:

The proposed authorization remains consistent with the Conservancy's October 26, 2000 authorization regarding project description, site description, project history, project support, and consistency with Conservancy's Enabling, Legislation, Project Selection Criteria and Guidelines, Coastal Act, and LCP Policies (see Exhibit 1).

COMPLIANCE

WITH CEQA: The Matilija Dam feasibility study only involves data collection which will not result in a serious or major disturbance to an environmental resource. Therefore, the project is categorically exempt from the California Environmental Quality Act (CEQA) pursuant to 14 Cal. Code of Regulations Section 1506. Upon approval, staff will file a notice of exemption for this project.

EXHIBIT 1

October 26, 2000 Staff Recommendation

COASTAL CONSERVANCY

Project Summary

October 26, 2000

MATILIJA DAM STUDIES

File No. 99-099

Project Manager: Neal Fishman

RECOMMENDED ACTION: Authorization to: 1) disburse up to \$1,625,000 for consultant services, including but not limited to services from the United States Bureau of Reclamation and other federal agencies, to study the feasibility of removing the Matilija Dam on Matilija Creek, a tributary of the Ventura River and 2) disburse up to \$125,000 to the Institute for Fisheries Resources, a nonprofit organization, to study the feasibility of, and process for, removing the Matilija Dam.

LOCATION: Ventura County, on the Ventura River at the Matilija Dam on Matilija Creek, a tributary of the river, approximately 16 miles from the river mouth (Exhibits 1 & 2)

PROGRAM CATEGORY: Resource Enhancement

ESTIMATED COST: Matilija Dam Feasibility Studies (current phase)

U.S. Bureau of Reclamation	\$200,000
Army Corps of Engineers	\$150,000
United States Geological Service	\$200,000
County of Ventura (in-kind)	\$35,000
Coastal Conservancy (Salmon Funds)	\$1,000,000
Wetlands Recovery Project	\$750,000

PROJECT SUMMARY: Staff recommends that the Coastal Conservancy authorize disbursement of funds for various studies to determine the feasibility of removing the Matilija Dam on the main stem of Matilija Creek.. This dam is a major blockage to anadromous fish passage in the Ventura River system. It also blocks the flow of sediments in the system. This impacts both upstream and downstream wetland and riparian habitat and the supply of sand to nourish beaches south of the mouth of the Ventura River. The dam has also blocked and inundated fish spawning and rearing areas upstream. The project is a part of the work

plan for the Southern California Wetlands Recovery Project. Additionally, since the dam holds back several million cubic yards of sediment, the project has been discussed by the Coastal Sediments Management Group as a possible source of sand for beach nourishment.

Built in 1947, the Matilija Dam was intended for both water supply and flood control. Since its construction the reservoir behind the dam has filled with sediments. Engineering reports in the 1960s led to the notching of the dam to remove weak concrete sections. These two factors reduced the capacity of the reservoir to only 500 acre feet from its original 7,000 acre feet. This lack of current utility and the above mentioned negative environmental impacts has led to a call for its removal.

Matilija Dam is a relatively large concrete arch dam. It is nearly 200 feet high from bedrock to its highest point. It spans over 600 feet at the top. There has been little or no experience in the United States in removing a dam this large. Moreover, this dam is in a remote area accessible only over a narrow road. If the dam were removed all at once there would be extreme risk that sediments now stored behind it would quickly wash downstream in a major storm. This could destroy existing habitat. It would likely raise floodplain elevations along the Ventura River, putting life and property at risk.

The proposed funding would be used to carry out studies to determine ways to economically remove the dam, probably over time. This is a continuation of various studies which have been recently completed by the Bureau of Reclamation, the U.S. Army Corps of Engineers (Corps), the U.S. Fish and Wildlife Service and the U.S. Geological Service (USGS). It also follows from a study partially funded by the Conservancy through the Southern California Wetlands Recovery Project to remove a small portion of the dam to test and demonstrate deconstruction methodologies and cost.

The studies to be completed under this recommendation would include a complete profile of the sediments behind the dam and characterization of the historic and current channel of the river. It would also include new hydrological analysis. Once completed information from these studies will be used to further refine the potential methodologies for removing the dam and moving the sediment. Environmental studies will then be undertaken which will lead to a decision on a specific projects.

COASTAL CONSERVANCY

Staff Recommendation

October 26, 2000

MATILIJA DAM STUDIES

File No. 99-099

Project Manager: Neal Fishman

STAFF

RECOMMENDATION: Staff recommends that the State Coastal Conservancy adopt the following Resolution pursuant to Sections 31250-31270 of the Public Resources Code:

“The State Coastal Conservancy hereby: (1) authorizes disbursement of an amount not to exceed one million six hundred twenty-five thousand dollars (\$1,625,000) for consultant services, including but not limited to services from the United States Bureau of Reclamation and other federal agencies, to study the feasibility of removing the Matilija Dam on Matilija Creek, a tributary of the Ventura River; and (2) authorizes disbursement of funds not to exceed one hundred twenty-five thousand dollars (\$125,000) to the Institute for Fisheries Resources, a nonprofit organization, to study the feasibility of, and process for, removing the Matilija Dam, subject to the condition that prior to disbursement of funds to the Institute for Fisheries Resources, the Institute shall submit to the Executive Officer of the Conservancy a detailed budget and work program.”

Staff further recommends that the Conservancy adopt the following findings:

“Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed authorizations are consistent with Public Resources Code Section 31251 of the Public Resources Code which authorizes the Conservancy to award grants to local public agencies and nonprofit organization for the purpose of developing corrective measures to enhance coastal resources;
2. The project is consistent with Public Resource Code Section 31251.2 which authorizes the Conservancy to award grants to enhance the natural character of coastal

resources by enhancing a watershed which is partly inside and partly outside of the coastal zone;

3. The project is consistent with the Interim Project Selection Criteria and Guidelines adopted by the Conservancy on May 27, 1999; and
 4. The Institute for Fisheries Resources is a private non-profit organization existing under the provisions of Section 501(c)(3) of the United States Internal Revenue Code and having among its principal charitable purposes the preservation of land for scientific and educational opportunities.”
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STAFF DISCUSSION:

Project Description: This project involves various studies to determine the feasibility of removing the Matilija Dam on the main stem of Matilija Creek. This is a continuation of studies which were partially funded by the Conservancy early this year through the Southern California Wetlands Recovery Project on January 27, 2000 (Exhibit 3). This dam is a major blockage to passage of the endangered southern California steelhead (*Oncorhynchus mykiss*) in the Ventura River system. It is estimated that approximately 50 percent of the historic steelhead habitat and production of the Ventura River system is above the Matilija Dam. It also blocks the flow of sediments in the system. This impacts both upstream and downstream wetland and riparian habitat and the supply of sand to nourish beaches south of the mouth of the Ventura River. The dam has also blocked and inundated fish spawning and rearing areas upstream.

Built in 1947, the Matilija Dam was intended for both water supply and flood control. Since its construction the reservoir behind the dam has filled with sediments. Engineering reports in the 1960s led to the notching of the dam to remove weak concrete sections. These two factors reduced the capacity of the reservoir to only 500 acre feet from its original 7,000 acre feet. This lack of current utility and the above mentioned negative environmental impacts has led to a call for its removal.

Matilija Dam is a relatively large concrete arch dam. It is nearly 200 feet high from bedrock to its highest point. It spans over 600 feet at the top. There has been little or no experience in the United States in removing a dam this large. Moreover, this dam is in a remote area accessible only over a narrow road. If the dam were removed all at once there would be extreme risk that sediments now stored behind it would quickly wash

downstream in a major storm. This could destroy existing habitat. It would likely raise floodplain elevations along the Ventura River, putting life and property at risk.

The proposed funding would be used to carry out studies to determine ways to economically remove the dam. This is a continuation of various studies which have been recently completed by the U.S. Army Corps of Engineers, Bureau of Reclamation, the U.S. Fish and Wildlife Service and the U.S. Geological Service (USGS). It also follows from a study partially funded by the Conservancy on January 27, 2000, through the Southern California Wetlands Recovery Project to remove a small portion of the dam to test and demonstrate deconstruction methodologies and cost.

The studies to be completed under this recommendation would include a complete profile of the sediments behind the dam and characterization of the historic and current channel of the river. There would also be new hydrological analysis and continuing biological studies. Once completed, information from these studies will be used to further refine the potential methodologies for removing the dam and moving the sediment. Environmental studies will then be undertaken which will lead to a decision on a specific projects.

The Institute for Fisheries Resources would participate in the design of the various studies and in informing the public about the project. The Institute, which was recently awarded a grant by the Conservancy to study the San Clemente Dam on the Carmel River, would use its experience working on other dam removal studies, most notably the Elwa Dam in Washington State, to ensure both cost control and technical proficiency in the studies to be completed for Matilija. The Institute would also undertake a public information process to ensure that people who might be affected by the removal of the dam would be informed of its benefits and any risks.

Project Financing: The funding for the Matilija studies would be from a combination of federal and State funds. The majority would come from the Conservancy. One million dollars would come from Proposition 12 funds for salmon habitat. Seven hundred fifty thousand dollars would come from the Southern California Wetlands Recovery Project which had previously authorized funding for this project at up to \$1,000,000. The Bureau of Reclamation would provide project management valued at approximately \$200,000. A similar amount of funding is expected from the U.S. Geological Service and possibly from the U.S.

Fish and Wildlife Service. The U.S. Army Corps of Engineers would also provide approximately \$150,000.

Except for a grant to the Institute for Fisheries Resources, all of the Conservancy's funding would be in the form of consulting contracts, not grants or cooperative agreements with the federal agencies. The grant to the Institute will enable it to assist in the development of the project using its considerable experience with similar projects, chief among them being the Elwa Dam complex in Washington state, which has similar sediment problems to the Matilija. It will take a lead role in the development of work programs for the project and public participation, and in the review of all studies and plans.

It is expected that the bulk of the work will be accomplished through an interagency agreement between the Conservancy and the Bureau of Reclamation using their existing scientific and technical team. Unlike similar projects that the Conservancy has undertaken, the costs associated with this project will only include direct study expenses. Project management and indirect costs will not be charged by the federal agencies. This approach is expected to save time and money on the project. However, if the project eventually goes to implementation, there is no guarantee that these initial feasibility costs will be considered by federal agencies as part of a required project match unless this is written into the authorizing legislation for the project.

It is also possible that local contractors may carry out some of the work. If needed, experts in sediment transport, engineering, or other disciplines will be hired as consultants to the process.

Site Description: The Matilija Dam is approximately 16 miles upstream from the mouth of the Ventura River. It stretches across a relatively narrow and steep canyon. Much of the original extent of the reservoir behind the dam has been filled with sediment. A jumble of native and nonnative riparian forest has grown up upstream of the still-existing lake behind the dam. This includes the giant invasive reed *Arundo donax* and other nonnative plants which have been steadily populating California rivers and streams. Future projects will eventually include eradication of these plants and replacement with native species.

Downstream of the dam the Ventura River system is hardly pristine. The Robles Diversion Dam, which takes water from Matilija Creek, also constitutes a blockage to fish passage, albeit a much smaller one. This dam diverts water to another tributary of the Ventura River where it is stored in Casitas

Lake. Any project to remove the dam and reinstate natural sediment flow will have to divert this around the Robles Dam.

Further downstream the river system still provides spawning and rearing habitat for fish. It also contains wetlands of various types. A project to build a fish ladder and related devices on the Robles Diversion is now in the final planning stages. In the next few months, staff expects that it will recommend to the Conservancy that it provide partial construction funding for this project.

Project History: In 1997, the southern California steelhead were listed as endangered under the federal Endangered Species Act. The Ventura River was included in this listing. The Matilija Dam and the Robles Diversion were identified by the California Department of Fish and Game as major impediments to steelhead migration.

The Matilija Dam was constructed in 1947 by the Ventura County Flood Control District for both flood control and water supply. Over the years it served these functions relatively well but filled with sediment, especially after major fires upstream. In 1965 an engineering report showed that the top of the dam was corroding. The report recommended notching it. This was done in two stages. This lowering of the dam by 30 feet along with sedimentation has reduced the dam's capacity from 7,000 acre feet to only about 500 acre feet today.

Interest in removing the dam gained speed in 1999. Through the efforts of Congressman Gallegly, the U.S. Army Corps of Engineers received an appropriation of \$100,000 to develop a reconnaissance study. The Bureau of Reclamation and the USGS also began looking at the removal of the dam as did the County Department of Public Works. The County Board of Supervisors has endorsed removal of the dam.

During 1999 and most of this year, the Bureau of Reclamation completed an extensive appraisal study for removing the dam. This included estimating the full sediment load behind the dam and analyzing surface sediments. The USGS, along with the Fish and Wildlife Service, conducted field studies of plant and animal species above and below the dam and began work on characterizing the channel.

It is now estimated that the reservoir behind the dam holds 6,000,000 cubic yards of sediment. This is expected to include soils, rocks, and boulders of varying sizes. Clearly, the management of this sediment load is one of the key issues for removing the dam. How it is managed will affect the cost of the

project, the safety of people and property downstream, and the habitat value of the lower river.

To fully explore ways to manage sediment will require analysis of the material behind the dam, the amount of water which flows through the system in various cycles, and the capacity of the channel. It will also require an analysis of the environmental impacts of various methodologies.

PROJECT SUPPORT: This project is supported by a wide range of public agencies, elected officials and environmental groups and has been given high priority by the Southern California Wetland Recovery Project (Exhibit 4).

**CONSISTENCY WITH
CONSERVANCY'S
ENABLING LEGISLATION:** The proposed funding authorization is consistent with Section 31251 of the Public Resources Code which authorizes the Conservancy to award grants to local public agencies and nonprofit organizations to enhance coastal resources which have “suffered loss of natural and scenic values” due to the “improper location of improvements” and other “human-induced events”. The Matilija project will enhance the natural character of coastal resources by increasing the supply of sand and the recovery of the endangered southern California steelhead.

The proposed funding authorization is also consistent with Section 31251.2 which authorizes the Conservancy to undertake a project or award grants to enhance watershed resources which are partly inside and partly outside of the coastal zone in order to enhance coastal resources within the coastal zone. The Ventura River system is a watershed resource which is partly inside and partly outside of the coastal zone. The project will enhance this resource by leading to the eventual removal of the Matilija Dam. Anadromous fish, wetlands, and beaches are the resources in the Coastal Zone which will benefit from the project. A resolution requesting Conservancy involvement in both the Matilija and Robles projects has been adopted by the Ventura County Board of Supervisors (Exhibit 5).

**CONSISTENCY WITH
CONSERVANCY'S
PROGRAM GUIDELINES:** The proposed project is consistent with the Conservancy's Interim Program Guidelines adopted May 27, 1999, in the following respects:

Required Criteria

Promotion of the Conservancy's statutory programs: As noted above both the Matilija project is consistent with Chapter 6 of Division 21, the Conservancy's resource enhancement program.

Consistency with the proposed funding source: The projects will use funding from Proposition 12, Section 5096.352(e) which may be used "for direct expenditure and for grants to public agencies and nonprofit organizations to protect, restore, acquire, and enhance habitat for salmon." The project will restore or enhance habitat for the southern California steelhead (*Oncorhynchus mykiss*), part of the salmonid family, and which is identified as a salmon by the National Marine Fisheries Service, being anadromous and identified within the same genus as all other salmon species.

The Matilija Dam project also will use part of an appropriation from the State General Fund for the Southern California Wetlands Recovery Project. The governing board of the Recovery Project has placed this project on their high priority list. The removal of the dam and the reestablishment of sand flows down the river will greatly benefit wetlands along the stream and in the Ventura River estuary.

Support: This project is widely supported by local and state political leaders, public agencies, and the environmental community. There have been no opposing voices.

Location: The Matilija Dam is 16 miles from the ocean; however, the benefits of the project directly affect the ocean and coastal resources.

Need: Approximately \$400,000 of federal money is being expended over the next year on the Matilija project. No local money is available. Without Conservancy participation to ensure that the feasibility studies are completed it is likely that this project will not progress. The research from this effort is critical to determining how to proceed.

Additional criteria:

Urgency: These projects are designed to improve habitat for the endangered Southern California steelhead. Measures to protect endangered species are urgent. Additionally, there is a fleeting opportunity for real cooperation between the federal and State governments to deal with the Matilija Dam. It is urgent that the State provide some of the support for this project.

Greater-than-local interest: These projects have the support of state and local politicians and Congressman Gallegly. They are also supported by Secretary for the Interior Babbitt. They are strongly supported by many statewide environmental groups.

Resolution of more than one issue: Removal of the Matilija dam would help to resolve loss of wetland and riparian habitat, the decline of the steelhead, and loss of beaches.

Innovation: The feasibility work on the Matilija dam is designed to determine the best, most cost effective method for removing the dam. Innovation may well be the result of these efforts.

Realization of prior Conservancy goals: The Matilija project will help to further the goals of the Southern California Wetlands Recovery Project, which was created by the Resources Agency and is administered by the Conservancy. The Recovery Project previously funded the demonstration project for the Matilija Dam.

Cooperation: Work on the Matilija Dam will be completed using a consulting team from the USGS, Bureau of Reclamation, and the U.S. Fish and Wildlife Service. The County of Ventura will also assist with coordination and advice on a technical advisory team. This team also includes the Department of Fish and Game and other public agencies. The Institute for Fisheries Resources will also be part of the advisory team and will take a leading role in project development.

CONSISTENCY WITH
THE COASTAL ACT:

Although the actual work to be completed under this authorization will be done outside of the coastal zone, and no coastal development permit is required for either project, the end result of this work, the ultimate removal of Matilija Dam, is consistent with the Coastal Act. Section 30231 requires that “biological productivity of coastal waters, streams, wetlands, estuaries . . . be maintained and where feasible, restored. . . .” This project is intended to lead to the restoration of such coastal biological resources.

CONSISTENCY WITH
LOCAL COASTAL
PROGRAM POLICIES:

The project is consistent with the Ventura County Local Coastal Program policy that requires the county to “work in close cooperation with other agencies and jurisdictions to provide comprehensive and biologically sound management of

coastal wetlands.” Both of these projects will have positive impacts on the water quality and biological productivity of the Ventura River system, including its wetland and riparian areas.

COMPLIANCE

WITH CEQA: The proposed feasibility studies for the Matilija Dam will only involve data collection which will not result in a serious or major disturbance to an environmental resource. Therefore, the project is categorically exempt pursuant to 14 California Code of Regulations Section 15306. Upon approval, staff will file a notice of exemption for this project.